



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,636	08/03/2001	Bart R. Jones	44560	5802

109 7590 08/27/2003

THE DOW CHEMICAL COMPANY  
INTELLECTUAL PROPERTY SECTION  
P. O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Applicant(s)

09/921,636

Examiner

Chong H. Kim

Applicant(s)

JONES, BART R.

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 17.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The Examiner acknowledges the Applicant's Response filed Aug 7, 2003 in response to the Office action made on Jun 11, 2003.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 7-10, 13, 15-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, U.S. Patent 4,498,433 in view of Matsushita et al., U.S. Patent 5,717,009.

Ogawa shows, in Figs. 18-30, an oil pan assembly, comprising;  
a metal engine component 202 having an associated first mating surface;  
a molded plastic oil pan 311 having an associated second mating surface;  
an attaching device 320, 321 in contact with the first mating surface and the second mating surface for joining the first component and the oil pan to define an oil pan assembly, wherein the resulting joint has a strength greater than the strength of the molded plastic oil pan;  
and

wherein the first mating surface and the second mating surface are generally planar;

Art Unit: 3682

but fails to show an adhesive as an attaching and sealing means in lieu of the gasket and fastening device and a primer contacting the adhesive.

Matsushita et al. discloses, in column 11, lines 19-27, an epoxy adhesive that can be used in automobile parts such as an oil pan of an engine wherein the adhesive is a cure-on-demand adhesive. As a result the joint is substantially free of a sealing gasket.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the attaching device of Ogawa with the adhesive as taught by Matsushita et al. in order to provide a simpler and quicker method of attaching so that labor and manufacturing cost can be reduced.

As to the matter of the primer contacting the adhesive, Examiner takes official Notice the fact that providing a primer for adhesion is known in the chemical bonding art and such utilization of the practice would be within the level of ordinary skill in the art. See Pluddemann, U.S. Patent 4,961,967.

3. Claims 3, 4, 11, 12, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Matsushita et al. as applied to claims 1 and 9 above, and further in view of Tani et al., U.S. Patent 5,250,629.

Ogawa in view of Matsushita et al. shows, as discussed above in the rejection of claims 1 and 9, the oil pan assembly comprising the molded plastic oil pan but fails to show the oil pan being made of polyamide and syndiotactic polystyrene or an injection molded filled plastic blend of nylon 6,6 and syndiotactic polystyrene, and the primer contacting the adhesive.

Art Unit: 3682

Tani et al. discloses, in the Abstract and in column 22, lines 3-29, an engine parts comprising a material made of polyamide and syndiotactic polystyrene or an injection molded filed plastic blend of nylon 6,6 and syndiotactic polystyrene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the material of the oil pan of Ogawa with the thermoplastic material as taught by Tani et al. in order to provide a stronger and lasting oil pan that reduces the maintenance and labor costs.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Matsushita et al. as applied to claim 1 above, and further in view of Drauglis et al., U.S. Patent 4,374,717.

Ogawa in view of Matsushita et al. shows, as discussed above in the rejection of claim 1, the oil pan assembly comprising the molded plastic oil pan but fails to show the pan having a plasma coating thereon.

Drauglis teaches, in column 3, lines 5-13, a thermoplastic article having a plasma coating. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the plastic oil of Ogawa with a plasma coating as taught by Drauglis in order to “compensate for minute surface defects or create a high gloss underlayer” as described by Drauglis.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Berger et al., U.S. Patent 4,682,672 and in view of Matsushita et al.

Art Unit: 3682

Ogawa shows, in Figs. 18-30, an oil pan assembly, comprising;

- a metal engine component 202 having an associated first mating surface;
- a molded plastic oil pan 311 having an associated second mating surface;
- an attaching device 320, 321 in contact with the first mating surface and the second mating surface for joining the first component and the oil pan to define an oil pan assembly, wherein the resulting joint has a strength greater than the strength of the molded plastic oil pan;

but fails to show clips on the oil pan to engage cutout portions of the engine, and an adhesive as an attaching and sealing means in lieu of the gasket and fastening device.

As to the matter of clips on oil pan, Berger et al. shows, in Figs. 1-10, an oil pan comprising clips 44 to engage with a cutout portion 16 of the engine component 10.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the bolt fastener attaching device of Ogawa with the snap-on oil pan as taught by Berger et al. in order to “provide a snap-on type oil pan construction that permits easy assembly of the same to the engine block merely by an upward thrust of the oil pan to hook over the lower ledge of the block in a secure manner” as described in column 1, lines 47-51, by Berger et al.

As to the matter of adhesive, Matsushita et al. discloses, in column 11, lines 19-27, an epoxy adhesive that can be used in automobile parts such as an oil pan of an engine.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the attaching device of Ogawa with the adhesive as taught by Matsushita et al. in order to provide a simpler and quicker method of attaching so that labor and manufacturing cost can be reduced.

***Response to Amendment***

6. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

As to the applicant's request for a new non-final Office action, the request has been denied since there is no basis for such action.

***Response to Arguments***

7. In response to applicant's argument that there is no suggestion to combine the references, particularly with Ogawa in view of Matsushita et al., and Ogawa in view of Tani et al., the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In the case of Ogawa in view of Matsushita et al., Matsushita et al. suggests, in column 3, lines 8-14, that the object of the invention is to provide an adhesive that has rapid curing property and excellent adhesiveness. As it was provided above the reasons for combining Matsushita et al. with Ogawa, it would have been obvious to modify the attaching device as shown by Ogawa with the adhesive that adherents in a short time with an excellent adhesiveness as taught by Matsushita et al. so that the cost can be reduced.

In the case of Ogawa in view of Tani et al., Tani et al. discusses deficiencies in other inferior heat resistance and chemical resistance polymers, in column 1, lines 20-29.

Furthermore, Tani et al. discusses the styrenic polymers having excellent heat and chemical resisting properties. However, Tani et al. finds such styrenic polymers have “poor compatibility with other types of resins, little adhesion to a metal, etc. and insufficient impact resistance” as described in column 1, lines 39-47. In order to overcome such deficiencies, Tani et al. describes, from column 2, line 64 to column 3, line 2, combined with the disclosure in column 22, lines 20-29, that a material made of polyamide and syndiotactic polystyrene or an injection molded filled plastic blend of nylon 6,6 and syndiotactic polystyrene can be produced “in order to overcome the disadvantage of the aforesaid (polymers)”. Therefore, Tani et al. teaches in the reference to modify the material of the oil pan of Ogawa with the thermoplastic material as taught by Tani et al. in order to provide a stronger and more lasting oil pan that can reduce the cost.

Furthermore, even if Matsushita et al. or Tani et al. fails to suggest the motivation in the references themselves, it would have been obvious to apply an adhesive or a certain polymeric materials on/in the oil pan of Ogawa, since such modifications would have involved a mere application of known devices or methods. A selection of known material based on its suitability for the intended use, or a use of newly available means from an implementary art is generally recognized as being within the level of ordinary skill in the art. *In re Leshin*, 125 USPQ 416; *Lyon v. Bausch and Lomb*, 106 USPQ 1.

8. In response to the applicant’s argument that the Examiner must show some objective teaching in the prior art or the knowledge generally available to one of ordinary skill in the art regarding the rejection of claims 7 and 16, the Examiner provided along with the Official Notice, Pluddemann’s reference that teaches having a primer to improve the adhesion between a solid substrate and a thermoplastic polymer. In the art of chemical bonding, it is well known practice



Art Unit: 3682

to provide a primer for bonding thermoplastic polymer on a solid surface. Pluddemann was provided to show that such method has been practiced for long time as stated in column 1, lines 12-14.

9. In response to applicant's argument that the objective of Drauglis et al. and the applicant's plasma coating is different and hence it is non-analogous, it is the Examiner's contention that as long as the prior art meets the limitations as set forth in the claims the prior art can be considered analogous. Claim 20 broadly recites a plasma coating. And Drauglis et al. teaches a thermoplastic article having a plasma coating. The plasma coating is made from a metallic or alloy family. Therefore, the coating may have been used for different reasons but the result would have been the same as the applicant's intention, that is to reduce the fugitive hydrocarbon emission via the oil pan.

10. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). However, there is no improper hindsight reasoning, since all of the references showed some teaching, suggestion, or motivation being in the references themselves.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Monday - Friday; 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

chk  
August 25, 2003

  
**CHONG H. KIM**  
**PRIMARY EXAMINER**